REMARKS

By this Preliminary Amendment, a typing error on page 1 has been corrected. Entry of this Amendment is respectfully requested.

Respectfully submitted,
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I hereby certify that this correspondence is being deposited with the U.S. Postal Service as first class mail in an envelope addressed to: Assistant Commissioner of Patents, Washington, D.C. 20231, on December 7, 2001.

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EXHIBIT A

VERSION WITH MARKINGS TO SHOW CHANGES MADE TO
PAGE 1, LAST PARAGRAPH THROUGH TO PAGE 4

Antenna diversity systems of this type are preferably used for VHF radio reception, and have been in use for a long time, such as described in US patents 4,079,318 and [5,517,696] 5,517,686. The object of these diversity systems is to achieve by phase-coincident superimposition of two or more antenna signals, a stronger and more useful signal than obtained with a single antenna, in order to reduce the probability of level fading in the field of multi-way propagation. This leads in the combined signal to a signal-to-noise (S/N) ratio that is more favorable on the average with respect to the noise of the receiver. The flawless mode of operation of such an antenna diversity system, however, is limited by the fact that the partial waves (Rayleigh wave reception field) differ from each other only in insignificant ways with respect to their instantaneous frequency, with the result that there is no audible reception interference. In reception situations where beams of waves with the different transit times τ_0 to τ_3 superpose each other in the location of reception, the partial waves received no longer have the same frequency, and as a result of such superimposition, lead to disturbing frequency swings. During driving, these swings, following frequency demodulation, frequently lead to a spontaneously occurring static noise. The wave beams with the different transition times superimpose each other in the location of reception depending in each case on a Rayleigh distribution, which has different effects in conjunction with the different antennas installed on the vehicle. Thus, the antenna signals of two diversity antennas on the vehicle may also have different instantaneous frequencies particularly in the area of level fading. The difference between these frequencies is conditioned by the frequency modulation of the high-frequency carrier and, as a rule, is very substantial. The resulting phase difference should therefore be controlled by the phase shifter in the second signal path, if the signal in the first signal path has no disturbing frequency swings. On the other hand, in conjunction with rapid phase control, a signal disturbed in the first signal path would impress its interference, by the control process on the second signal path and thus forcefully cause such interference in the combined signal as well. Another drawback of this system is that it is limited to two antenna signals, so that no adequate effect in terms of diversity can be achieved with such a system. Interference in the neighboring channel acts in a similar manner because of a limited selection on the level of the intermediate frequency. Even signals occurring on the received

channel due to intermodulation of other VHF transmitters cause, in association with level fading, disturbing frequency swings acting on the useful signal. These swings cannot be eliminated with the phase control system.